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An
Inaugural Dissertation
on the
Physiology
OF THE
Brain AND Nerves

By
James C. Hull
of
Washington City D.C.

*Spiritus intus alit, letam que infusa per artus
Mens agitat molem, et magno se corpore miscet.*
H. Gale

That
the H. C.
the New York
wind and
Admission to
Admission
and hence
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the main
of these
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since will
the it be
of all
the unknown
and why this

That the true Philosophy of life is
only to be found in a knowledge of the
human Functions, is an opinion which intelligent
research and ingenious experiment is rapidly
adducing to the certainty of truth.

Admitting, as we must do, that in the Brain
and Nerves reside the great motor and percep-
tive principles of our system, Medicine must
ever remain an empiric art until a know-
ledge of these organs, like the volumes of its sys-
tem, and becomes the data of its practice, and
science will in vain contend to restore order,
while it conceals the humiliating truth, that
in of all subjects else, are the most unknown - It would be interesting to
explore why this peculiar effort of our kind, has

[illegible]

has been his in a variety, & has only presented to
 the observer, confused, and disordered facts.
 The disquiser of the Question: What is Life?
 has started from this letation with, the greatest
 ignorance and bigotry, & has divided the most
 brilliant discoveries of Galie but sagacious science.
 By the force the pursuit has been charged with
 having impurity and presumption, as if one cor-
 poral structure and functions had alone dic-
 tated the system of nature, & that is as alone
 the Creator had dispensed with the relations of cause
 & effect as subservient to his designs. — But so
 far as nature unfolds her plan, is this presump-
 tion — In the eye we see changes in surrounding
 with the variations of a physical ~~cause~~ agent — in
 our muscles the most perfect adaptation to me-
 chanical laws, both in structure and operation;
 and why may we not suppose that the life
 various properties of the organs may also be the

rest of the details
 to — There
 therefore that is
 history of nature
 quantity of life &
 always of nature
 which led by the
 it had become
 nature. But it is
 always of nature
 the nature and
 you made to
 has been small.
 but nature is
 that it is not
 the same for
 nothing. Of course
 To Godman has
 seen the matter

result of the activities but mechanical properties of matter — There is no element to be found in our
 structure that is not furnished from the common
 laboratory of nature, but imbued with the new
 property of life, we do not expect to see it execute
 ordinary activities. — Hence we learn it is not
 by accident by the absence of the "vicinity of
 life" that chemical laws are suspended by its
 influence. Be it so: but have not the active and
 various activities of a cell been obtained by
 the mystic and invisible influence of galvanism
 & been made to pass the test of an acid unchanged?
 And our intimate acquaintance with the elementary
 laws of matter is more accurate, but it not to say
 that it is not by some mechanical agency
 of the same power, that we have our Con-
 servation, Assimilation & Temperature sustained.
 Dr Sedgwick has said that — The laws of life
 place the materials in a proper relation, and

to have of

But if

has attended

one of the

to its operation

is not to be

of course

It is because

the situation

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is not to be

the laws of affinity combine them together.³⁰

But if 19 persons and contrived powers
have extended investigation into the nature and
laws of the vital principle, by at once referring
all its operations to some preternatural and
inscrutable cause, why have the efforts of
men of science been equally unavailing.
It is because the observation of facts, and
the scrutiny of experiments have been neglected.
Not contented with laboriously examin-
ing link by link in the long thread chain of
causation, they have neglected their intellects
in endeavoring to comprehend the ultimate na-
ture of mind and matter - They have over-
looked the matter of fact by attending solely
to the manner of the fact - Others have
imagined the ideas of ethereal & forces,
vital spirits &c. - And we see them

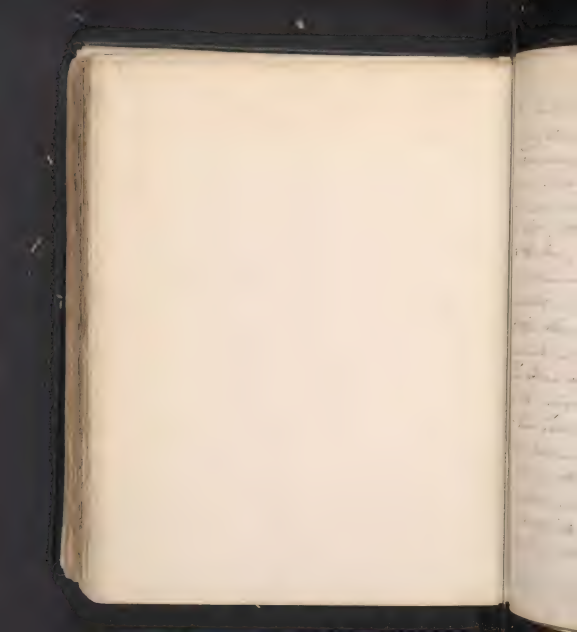
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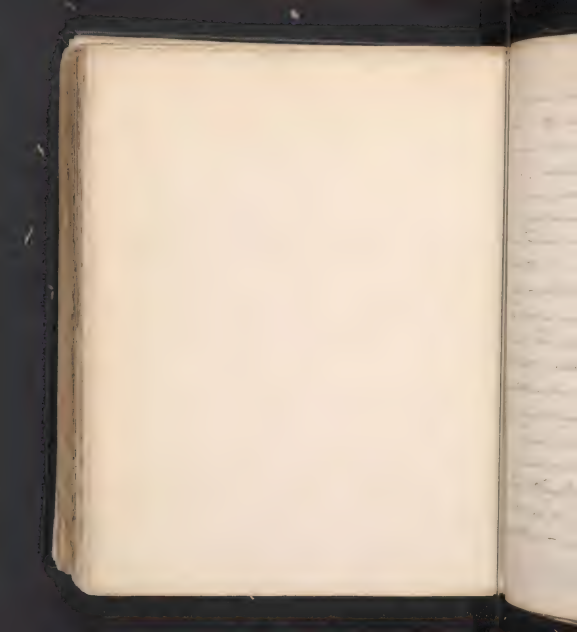
towards its interests
 at all the sources
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 views of such
 P. & B.
 The Board
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 they are ~~generally~~
 a internal
 structure of the
 together with the
 branches affor
 up in general
 animals that

These conditions being a mere and transient
 desire its introduction to the political mind
 with all the elements of its actual success
 depending on the force of its own
 weight of opinion of which it seems, of the
 American mind has been the most successful and extensive
 in its own mind more will be effected with
 the aid of such men as Dr. Estlin, Mr. Jones,
 Peck, & Bell

The State and its representatives are
 introduced to the heart of the nation
 as a nation in the extreme case the nation
 then is ~~entirely~~ divided, the national spirit
 is a national movement - the administration
 structure of the criminal and social crime with
 strength with the separate history, with the nation
 from hence a part to the separate nation, the criminal
 map an equal support. It is now that in our
 minds that we find the introduction of the









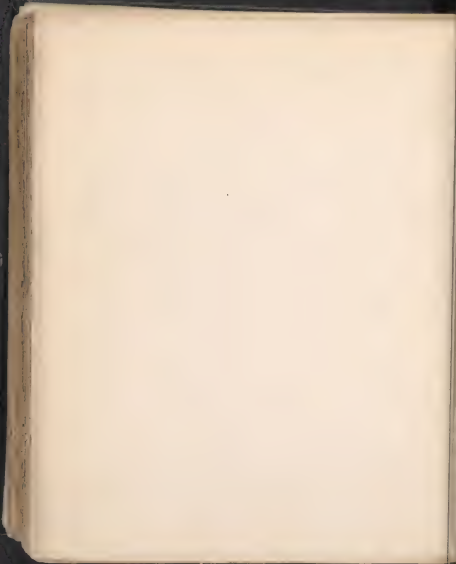
... and all of which are
the outcome of the same function of the brain.
All agree that its minute structure is singularly
curious, and most subtly connected with
the function of the brain.

Development. — That there exists in the embryo
a perfect representation of the future individual, is
an opinion that modern histology has abandoned.
In its place advanced the idea that all the parts are
successively formed, and increase in complexity &
approach to perfection, as they remove from their
most simple elements, and assume a higher state
of organization. Thus in ~~the~~ the first medi-
cinals of man are little else even the forms of its
more noble system, but at this time corresponding
to the perfect development of some in the body.

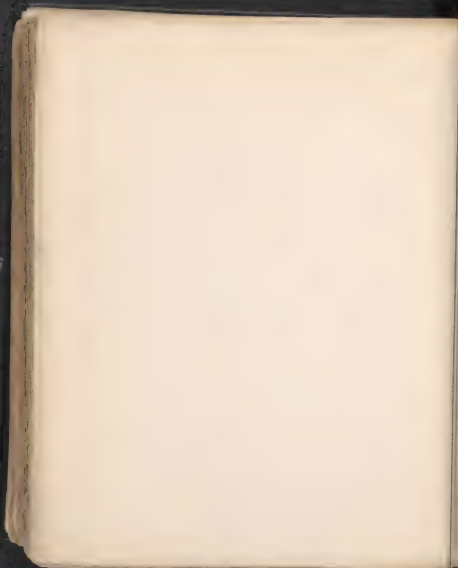
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Let us say, W. S. Emerson, for the lack of the active
 life of the imagination: you will perceive at first the
 cerebral hemisphere which is a white, into his entire
 spiritual form each other. After a time, you will see
 them affect the organization of the cerebral hemi-
 sphere of spheres: at a later period again, they will
 exhibit to you the appearance of their of spheres and
 finally, it is only at the epoch of their birth, and
 continues later, that they become the permanent
 forms which the intellect presents in the human mind.

It is the same in the same and philosophical studies
 we must be indebted for what we shall see in the
 next of the subject — An "Evolutionary Development"
 is typical in the formation of all the parts of our
 animal body — Every part will be something
 lower & related in its relation — Some will be
 the most "low" the low of "nature" and a few
 will be the most "high" the high of "nature" and a few
 will be the most "high" the high of "nature" and a few
 will be the most "high" the high of "nature" and a few



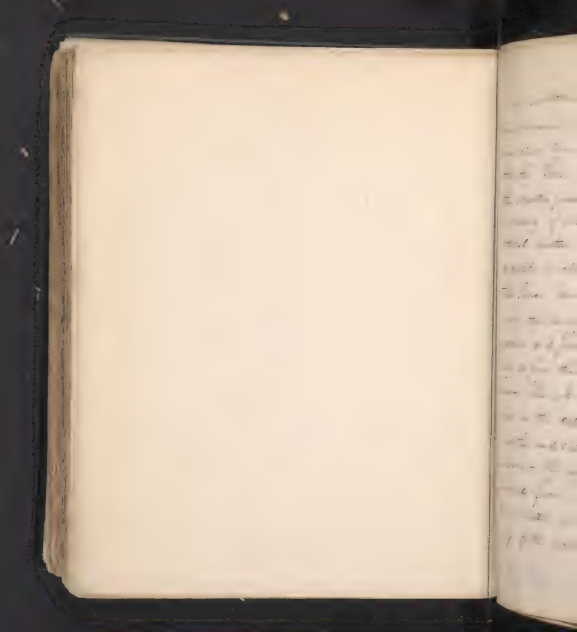
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The first of these is the
 fact that the system is
 not self-sufficient. It
 is dependent on the
 government for the
 supply of the raw
 materials. This is a
 serious disadvantage
 because the government
 can control the supply
 of the raw materials
 and thus control the
 production of the
 finished goods. This
 is a serious disadvantage
 because the government
 can control the supply
 of the raw materials
 and thus control the
 production of the
 finished goods.

... again, and extremely the formation has adapted
itself to the ideas of the homogeneity of the various
institutions. And of the transition to which the steps
of natural phases into another and again over.
So that the necessity of reciprocal instances is
derived from it is derived from the various determinations
which pass the limits of their step to achieve the same
in a previous one.

1. The subject matter of these observations are then
of the kind of the mind - The observations to which
we refer then due to the nature of the mind to
achieve the various phases being that it is a thing
that appears there of more or less individual substance.
The substance from the nature of the mind the
nature of the mind and being related to various objects
of the existence - The finding out the nature of the
substance here said to be individual - The time of
the existence between it and the individual is the
time from which it can come of substance of an individual.



of the ventral - They consider that all the re-
 sults of nervous action arise out of it as in the case of
 some fishes &c - & Dr. Haller has in his early thoughts
 that the fibres of nerves the surface of the skin &
 other sensitive parts are properly saying something like
 a surface of nervous matter - & I suppose the
 ventral matter to be the seat of the nervous system
 & that it extends proportionally to the length during
 the growth and it is necessary to be taken as the
 basis of the nerves - The ventral produces its own particular
 system and from various and other causes
 and the nerves have their own particular
 system - The ventral is distinctly a chain of seg-
 ments in the caterpillar, and the nerves arise from
 the ventral and extend to the ventral and the
ventral - The ventral and posterior ventral of the
 ventral system form the ends of the ventral axis of the
 ventral matter, and the always proportionate to the
 length of the ventral system this axis - The ventral

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Albugo, from the last, contains the ganglionic
center of these nervous substances, and proceeds to
most of the nerves of the sense - The elementary
nerve arises from within the M.C., ascends to
reach the cerebellum, and terminates into a plexus
of very dense fine capillary filaments; whence are
radiated kind of medullary tubes are distributed
in spiral 10 bundles to the periphery of the cere-
bellum, where it is an end, and is divided into
of this matter - The direction of the nerve is
parallel to the cerebellum, then in the cerebellum
a transverse section passes.

After the corpus - ganglionar has been found
to the medullary tube, it is the composition
of the nerve, and it is divided into two parts, the
first, and within the plexus, where they receive
relations of the ^{other} plexus, and from the same trans-
verse part of the M.C. - Thus, within the
medullary and transverse plexus, and the corpus



trials, and the thalami - Enlarged in their bodies
the spheres then pass to the whole, knitting of
the mass - beyond the space in which rest the
base of the convolutions there is a peculiar sub-
stance matter - This too at first in layers forms more
intimately distinct layers fasciculi, which coming
under they meet the fellaes of the opposite side, and
either by a simple juxtaposition, or interlacing of
the fibres then form all the convolutions -
The ventricles of the brain are formed by the op-
posing layers of the convolving and dis-
tending - Each convolution consists of a ~~single~~ the
duplication of a layer of the medullary matter, whose
external surface is clothed with a layer of cerebral
matter: and this is made evident by the presence
of some distending fluid as a ~~by~~ ^{by} ~~means~~
necessary to an artificial unfolding - It now shows
the internal surface of the ~~convolutions~~ ^{convolutions}
and the parts of the various structures of the



Brain an Organ to Ensur is a concluded and
uniform design, and are not the result of a
haphazard & fortuitous arrangement as some have
supposed - Also, the Idea is rendered probable of
the existence of independent Nervous Systems in
organs, by which alone can all the various and
independent actions of life and intellect be explained.
It would be impossible in the discussions of P. 3.
but it is highly for the reputation that their attention
unto the concurrence of such Men as Tiedemann
Swammerdam & Boerhaave.

The Nerves are divided into those of animal life
and those of organic - The first by Bidest receive
their origin from the Brain & the spinal marrow; the
last from the ganglia, but the accuracy of this di-
vision is not allowed - The pairs of animal life are
mostly symmetrical - Their primitive fibres ap-
pear first the form of Filaments, and then of cords,
after which they are invested with a sheath & the



two matter which is strong in the peristaltic
solar texture - The grey matter traces the primary
nerves in which is contained the nervous medulla -
Hence are the nerves continuous, and from pleasure
in which the deep sense nerve are it is concluded that
the branches of nerves are placed in each of the
Nerves - The Spinal in the portion of the Spinal
Communicate, best visible in the Spinal and the Spinal
separates the Spinal of Spinal, Spinal in a distinct
concurrent - What may be the ultimate texture and the
portion of the nerve to this unknown but it is thought
that they ultimately lose their investing succubane, and
they allow their medulla to penetrate the various structures
all. Spinal is said not only to have inserted the Spinal
matter there but also to have passed the medulla itself
tubular - After having undergone the Spinal, he comes
in to pass Spinal there the medullary Spinal.
The Spinal Spinal fluid which comes from the Spinal of
Spinal to act as a stimulant: and there is little another

[illegible]

that the medulla is the result of a section, and that in due
time down the brain, since in the latter case, the transfor-
tion of a nerve (divided) consists in its return, which enters
the case - I never observe, however, when divided, appears
to increase the solid cellular substance: a fact perfectly in-
conformable to the theory of the division.

One to the Cerebral & Spinal Systems, however, the
functions? & as the brain receives the action of the
lungs and circulation, the red blood is connected to the
functions of the brain and the skin; the former helps
to give an influence toward from the latter, and
becomes when in this circle of operations a part of
the nervous system. - The stimulus to a temporary
excitement. - That the brain is conscious from the
"muscular surface" which the latter is a seat of action,
and the lungs, and the brain influences each other, and
a calm at this period the part is sending red blood
the blood and the law pattern is better the respiratory
and the lateral muscles, which make the air that

in the production of this red blood particles
the cause. Thus he slowly exhibits the lungs asso-
ciating their function with the diaphragm & the inter-
costal muscles in action - Dr. Kebleton in his Physiology
says on the various Functions observes that the child
never attempts to breathe until the face is exposed to
the contact of the atmosphere - We ask if this may
not be attributed to the action of the cold air upon the
respiratory surface of the face (the parietal dura) which
transmits this action to the brain and sets the whole
respiratory apparatus in motion - (here the parietal dura
is not a source of sensibility, according to Mr. Bell
& Dr. Hall's experiments) and in addition to this, it is stim-
ulated directly, as the spinal marrow, & inferior respira-
tory are contributed to the same & these and various
organs feel the influence of the stimulation, direct-
ly from the action of the nerves of the face - Besides
this it is not conceivable that a nerve so thin & so
small should be in action like the trachea which

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It denies its power, is at this time totally insufficient - One should rather suppose that all the process of respiration, those of the pectoral as well as the thoracic, receive a direct but temporary excitement from the stimulus of external agents by which the first motions of respiration are performed - The efficacy of the nervous system is in cases of accidental asphyxia, and of delayed respiration at birth. Reynolds states in Obstetrics this explanation. I cannot believe that the increase in the blood supply in the Lungs are not ascribed to the parts being supplied. There remains some thing less subtle about this cause in respiration - This may apply to the general case but not in the case of the independent instance - Now we then see indeed when the N. the a considerable amount goes to the nervous system, when, in case of suffocation the blood, it stimulates the system - There must have been some action the "chemo-osmotic action" denied to ~~the~~ nervous system, even a nervous source for the nerve in the same way as the nervous system. That

[illegible]

I have been
 thinking of the
 importance of the
 question -
 and the interest
 to many of our
 friends - and
 the time & trouble
 which the
 subject demands
 of the public
 mind - and
 the necessity of
 having a
 clear and
 full
 understanding
 of the
 subject -
 and the
 necessity of
 having a
 full
 understanding
 of the
 subject -

the proper field for their action is afforded.

In infancy the sensations are vivid and consciousness the intensity of the sensations - Organic and mental disease of the nervous system predominates in this period - In adult age the sources of inspiration, the demand, and the sense of reason the means of instruction, than of pleasure, are longer in supplying experiencing delight from consciousness, more abundant - Old age exhibits the senses impaired, the brain and nerves much thinner, dark & less enriched with blood and ^{also} will not think that these appearances are connected with the first burst of passion, the capture of pleasure, and the susceptibility to pain, so characteristic of this age.

2. Nervous Functions -

Having thus given the development & maturing of the brain and nerves we proceed to describe the offices they perform - The functions of the cerebral system may be divided into animal & organic.

[illegible]

Under the first should be enumerated those having
 a relation to the Galliculi, - Epineurion, 2 Vena, 2 Arter-
 iae - Under the last all those functions that
 arise in the grand operations of Nutrition, Calor-
 ification and vital preservation - We multiply the
 names the functions into Sensorial, Nervous and
 Muscular - The last are the result of vital parts of
 feeding each other by their vital properties - The two
 last the result of a minute parts acting upon
 the rest -

It is a question of great and importance whether
 particular parts of the brain are appropriated to partic-
 ular functions and whether the powers of the ~~various~~
 various organs are different in different quadrates as
 they are in lateral forms dissimilation - The Philo-
 sophers secured themselves with apposition of dis-
 tinct parts, the destruction of brain in the immediate
 evidence of the soul - The great gland the corpus
 callosum, the Galliculi, the ventricles, have a close

I have been thinking
 of you very much lately
 and wondering how you
 are getting on. I hope
 you are well and happy.
 The weather here is
 very nice at present.
 I am writing you from
 my room at the hotel.
 I shall be home soon.
 I shall be glad to hear
 from you again.
 I am your affectionate
 friend,
 J. H. [Name]

surrounded with the electric - Haller supposes the soul
 & resides in all the medulla - Like an Electric, under the
 nervous matter: but the attempt is idle. We may find the
 organs mediating between the mind and its objects, but
 its own immediate location is an insupportable mys-
 tery. The organs of the intellectual and moral facul-
 ties have been supposed to ~~reside~~ have their
 base in the circumference while their apex terminates
 at some undisclosed internal point. To this it has
 been objected that large portions of the brain have
 been discovered without a corresponding injury to the intel-
 lect: but we are sure about that the whole of man
 is spiritual to a faculty has been discovered - These
 organs are also double, and besides, were all the prin-
 ciples of the mind dependant equally upon the integ-
 rity of all parts of the brain, it would be easier to dis-
 cover the ~~location~~ of all the faculties, rather than the
 injury of an individual one - Dr. E. Home
 has suggested that we may derive important conclu-

[illegible]

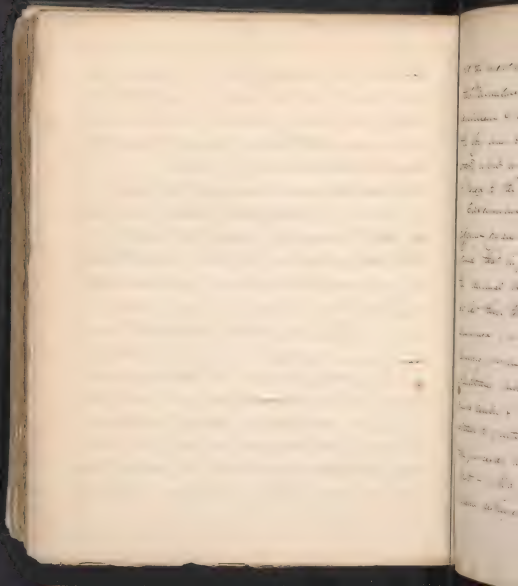
seems by compressing the results of injuries to this or-
gan variously inflicted and treated. - We give a
summary of instances. The military histories of Sir
J. H. Brown & Hughes are curious on this point &
would have been much more so, had their attention
been directed to its physiological bearing. Loss of
the generation faculty and atrophy of the men-
strual cycle followed a saber wound, which cut off
the external protuberance of the occipital bone. -
A Portuguese soldier, complained to Staff Surgeon
Hughes that a shell which had taken off a large
part of the occipital bone had completely ruined
his fertility away with it. - Pituitary membrane
was traced to the chorion of four discharges of co-
agulable blood beneath the edge of the tentorium.
Loss of memory followed an injury of the frontal
and parietal bones. In another case the power of di-
stinguishing objects was lost while memory remain-
ed. An injury of the parietal bone near the fonticel

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occasionally the entire loss of speech. A soldier wounded in the head lost his own language and found another: and a case is mentioned also, where a woman from a wound of the head, was made to speak Welsh though she had not done this for 20 years.

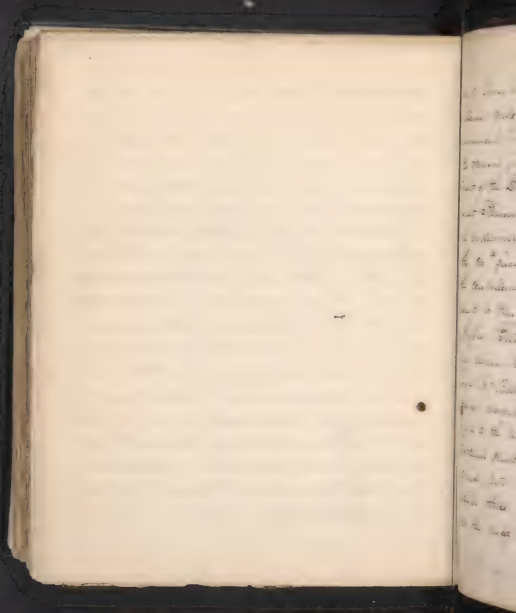
From all these cases we are taught that individual Faculties may be totally lost by partial injuries, while the other Faculties may retain their place & power.

That the inference can be drawn but that the mind manifests itself this individual power, and is itself composed of various, and in a measure, distinct organs - The part of the brain to which the nerves of sense are traced are indispensable to the performance of their functions - The tubercula quadrigemina whence the optic nerves arise have been found atrophied when the sight was lost - At times in the tubercula quadrigemina & water in the ventricles caused the loss of sight in the eye; dullness of hearing & difficulty of swallowing, so as to cause starvation, with



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all the mental faculties within - In a case where the
teeth, ^{the} animal had become extremely hardened, and the
occidentum & cerebrum much softened, the effects were that
the boy was always an idiot, never walked, spoke & under-
stood what was said - Here evidently the effects, ^{which} might
be traced to the injury of the reflection & sentiment organs.

Experiments were made, in to show the part that the
different organs bear in the animal economy - M. Flourens
found that in proportion as he sliced off the cerebellum, &
the animal became weak & cowardly in its motions, rather
at last than stable, & failed, when Faculties & sensation
remained: When he took out the cerebral lobes, (meaning
hemispheres, since & will was extinguished the the, & every
voluntary motion remained - The optic thalamus, the
corpora cerebri & the tubercula quadrigemina were, & sensation
retained to motion since & success the from the cere-
brum proceeds with inflexibility, but till it reaches their
base - M. Flourens observed that a worm of the Gen-
us *Ascaris* destroyed the power of propagation: he says it



back, from which I observed a great part of the cere-
bellum, could swim backward, but made no propulsive
movement in any days. — Certain substances
the stomach seem to produce their effects upon specific
parts of the Brain — These substances & accurate experi-
ments Thunberg has determined that these are not spin-
al exclusively upon the cerebral lobes - belladonna upon
the Cereb. ^{quad.} and alcohol, ammonia & others upon
the cerebellum, and the functions of these lobes acted on
seem to be thus alone affected. —

Mejer, Bell, Magendie, & others have made some
very curious discoveries with regard to the spinal mar-
row — Mr Bell has shown that there are two anterior
chords connected with the cerebral lobes, & giving
origin to the nerves of motion; and that there are two
posterior chords connected with the ~~cerebral~~ cerebellal
lobes, not appropriated to the nerves of sensation
while there are intermediate chords which stop short
so the med. ^{all.} are the source of the respiratory

1. The first thing I noticed
 when I stepped out
 was the cold. It was a
 surprise, but I was
 not prepared for it. I
 had heard that the
 weather was bad, but I
 didn't realize it would
 be so cold. I was
 wearing a light jacket,
 but it wasn't enough.
 I was shivering as I
 walked down the
 street. The people
 around me were
 wearing heavy coats
 and hats. I was
 out of place. I was
 a tourist, and I
 didn't know what
 to expect. I was
 nervous, but I
 was also curious.
 I wanted to see
 the city, to feel
 the pulse of the
 place. I was
 alone, and I was
 in a new world.
 I was a stranger
 here, and I was
 trying to find my
 way. I was
 lost, but I was
 also free. I was
 in a new place,
 and I was
 living. I was
 here, and I was
 now. I was
 a part of it, and
 I was
 home.

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nerves. - The accuracy of this division is tested by va-
rious experiments, and by many pathological facts. - Ex-
cising the posterior fasciculi of nerves induces their re-
sidual sensibility, while the irritation of the anterior ex-
cites spasmodic action of the muscles. - The corpus
of ramidalia & thosia, with the whole anterior part of
the spinal marrow were found captured in a man,
who had 40 years, laboured under paraplegia, but had retain-
ed the sensibility to the last living nerve. - M. Sedg-
e, a distinguished surgeon of Paris, has observed the same
coincidences of morbid appearances, with similar affec-
tions in a horse. - There is some sanction for the
deductions in the experiments of M. Béranger, who
thinks himself authorized to attribute to the posterior
columns of the Sp. Ma. the nerves of extension & exten-
sion of the limbs, but to the anterior, flexion alone.
It is difficult to reconcile these opposing experiments
except in supposing that the irritation he employed
in the posterior fasciculi, extended, partially to the anterior

[illegible]

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The same may be said for the Functions ascribed by a difference in the sensible properties of the nerves. - Nature has been said to be passing in causes, but uniform in effects - This is true but this we admit the primitive unity of the vital nervous principle, yet we cannot doubt but that it operates in producing distinct effects by all manner and distinct means - The older philosophers ~~also~~ concluded that these very different functions sensation and motion are effected thro' one & the same organ - This would be most anomalous, not only in the incomprehensibility of these functions, but by the variety in the physical properties of the nerves themselves - ~~Supposed~~ ^{and the internal} arrangement of different nerves is known to vary but that also they are dissimilar in the colour and sensitivity of their medulla - This is particularly remarkable in the nerves of the senses - Hence Wharton concludes that the "optic nerve would be unfit to transmit into the medulla the proper gate imperfections made by light" - Confirming by ample experiment the fact that even

The first of these is the
 fact that the
 the second is the
 the third is the
 the fourth is the
 the fifth is the
 the sixth is the
 the seventh is the
 the eighth is the
 the ninth is the
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glomus has a peculiar rudiment, Bell & Magendie have
 classified the same into portions. 1st Part of sensation.
 2nd Part of voluntary motion 3rd Part of respiration.
 Part of 1st Part that enters all parts of the body in
 nature of feeling & action. I do not believe that
 this division extends so far, so as to make it think that
 these sensitive fibres will add many new to those
 of any other sense. Divided further the combined,
 in so far that the voluntary part is sense.
 - the other sense is a sense in which the fibres act of
 sensitive & muscular are united. The contraction of
 its sup. max branch gives motion to the division
 of the lower muscles of the jaw and connected in the ap-
 p. & part of action of respiration. The middle & lower
 branches of par vagus produce a reciprocal concert
 of the muscles of respiration with those of deglutition -
 its division occupies little time, but the respiratory
 motion of the eye & face are gone and then the sensory
 & motion & are ordered point. These motions, as if

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I think the above that, practical medicine has, in
 some respects. The above is, as it is, which has to
 be in the way of distinguishing the one that which
 arises from the disordered of the respiratory
 vessels: and on this is especially understood the in-
 variable process & effect with which respiration & coughing
 are accompanied, in all the bronchial affections of
 the human voice, from the most severe & chronic to
 the unimportant short & rapid, and often —
 for does any when the functions of certain
 filament may become impaired, without affecting
 functions depending upon other filaments — Thus
 a simple cold, or even a violent cold, without any exception
 is due to the functions of respiration & expiration.
 The inflammation occurs in the lungs, when I say so
 has impaired the function — The two are, however, as
 an old author says, relating the functions of the
 voice & respiration, relates the case of a man who
 lost the power of articulation, tho' he retained ^{the control} for all

the muscles of the tongue and face: here the muscles of
voice and expiration had lost their requisite consent of ac-
tion.

The idea as an idea of the brain affect the nerves
on the opposite side - Jones says the receptions of the
are more - The nerves of motion are ^{more} frequently affected
than those of sensation (Bichat). The union of the spi-
tal nerves seemed to imply a co-ordination of their fibres,
but the pathological facts were entirely contradictory
on this point - These seem now to be assisted by
the observation of Wallaston in the semi-decipation
of these nerves and E. L. Eschscholtz has recently pub-
lished an illustration case where a Hemiplegia of the
left side was attended with the total loss of sight on the
in the right half of each retina; consequently by the im-
vision of objects she only saw those objects that were on
the right side of a middle line. When he always
that the nerves of motion decapitated in the spinal cord,
but this is disproved by the experiment of Galen in which

[illegible]

I have been thinking of you
 to write in
 your opinion
 you are the
 one who will
 be the one
 to write the
 letter to the
 committee
 I have been
 thinking of you
 to write in
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 one who will
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What effect has the force upon the Brain! Is it completely
 its relaxing motion, and extending power, & by the suspension
 of some spiritual and vegetative principle. We think that
 it is on the latter & large portions of the cranium & brain
 have been removed without producing any effect & the destruc-
 tion of the blood must have been a great dyspe-
 sion, while on the other hand some circumstances, some
 affections & the various excitation of spasm & such pro-
 duce that excitation of cerebral function which an influx
 of arterial blood is directed to. — In E. & M. we ob-
 serve that Convulsions ~~take~~ is the consequence of the
 outbreak to which the cerebrum has been accustomed
 being suddenly taken off. — But Convulsions occur
 take place always when large portions of the cranium
 have been removed — The explanation of the Brain
 simply requiring destruction is too mechanical & coarse.
 The law of nature has been so careful to afford to the
 first & best of secrets of the palmarian action, that
 to is the preparation of the whole product of a single

[illegible]

suppose to be only slight - (With Gallus we must believe
 the brain to be continually flooded, and that, from the
 flood it exerts some necessary and important principle.
 All must have been conscious of the vivacity of thought
 and elevation of spirits, following the operation of an in-
 sensual stimulus; and all, must have witnessed the ex-
 pression of pulse and brilliancy of eye, that attends
 the animating effect of the softer water. And though
 the same gives an explanation of the fact so mysteri-
 ous to many, why the eyes, sparkling, glowing, ex-
 press, prostrated, become the indications of passion,
 and the almost, peculiar attributes of the fresh water,
 &c. &c. - The explanation is that as a local artificial
 portion of the brain, and the properties of fresh water
 being as essentially & constantly in contact;
 the eye deriving its blood from the brain, and in common
 with the experience that quick, pulsation and fulness
 of its vessels, that give to its clearness, brilliancy
 & life - They are coincident effects from the same cause.

11. June 1864. B. 1. 1.
 The 11th June 1864.
 To the Hon. Secy.
 of the Navy.
 London.
 Sir,
 I have the honor to
 acknowledge the receipt
 of your letter of the 11th
 inst. in relation to the
 proposed purchase of
 the "HMS. "HMS."
 and in reply to inform
 you that the same
 has been forwarded to
 the Admiralty for their
 consideration.
 I am, Sir, very
 respectfully,
 Yours,
 J. B.

We now come to the consideration of the nature of the recapitulation,
after a the mode of its agency is sustaining the vital functions.
We see in animals two independent powers, sensation &
motion, and the the, independent principle of the one, and the
obvious causes of the other be his creature yet at two in
both, manifesting thus the medium of organization, therefore
relation must be ascribed by a reference to physical laws.
- These two powers relate to external existence, and either act upon
or receive impressions from external objects, with which they
are only concerned. Thus the medium of the process of sen-
sation is a general one, and all the purposes and func-
tions of this life are the creation and preservation of the
various parts that compose the existence of these two great
animal properties. - Our intention now is, to consider
which agency the powers act in this process of organization.
The animal organization of matter has been ascribed to various
powers, as by the Greeks: by the Latins - animals: by Hippocrates -
- spiritus faciens: by Newton - the matter itself disposed

[illegible]

to the English - the west. - This last term has been previously misinterpreted & confounded with intellectual culture & spiritual existence. These papers present what were to become inseparable with matter, and its retake of its changes - The soul and principles of existence, the no doubt intimately connected, should never be considered as necessarily independent. - The one may languish and be subjected with disease, while the other exists unchanged amid the vicissitudes of its mortal tenement - The one is lower animal, meets a corporeal structure, equal or superior to that of man, while the other, ever but finite, limns and fits existence - In vegetable life we see a lower approach to the perfection of the one, but not the truest trace of the other - and finally the one ascends from its carnal nest almost equal to its highest perfection, while the other is the noble distinction of man alone - May the true thinking & intellectual principles of man be so often united with that which feeds the nation, &

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proposed of organization - In this subject, we cannot
in this place give "all the opinions," which as Dr. Bacon
says "have been repeatedly published before - have"
repeatedly been obsolete - been ^{very} partially revived - and
"repeatedly become obsolete again"

We here define the terms used - By vital properties
we understand that principles ^{which} ~~that~~ is communicated to
matter in certain states, and induces it to assume or-
ganization - By Function, we mean the action of
matter organized, & possessed of vital properties,
and we here simply designate that state of being
in which the Functions are in action, or have the capac-
ity of acting.

Our readers will be somewhat interested to explain the
vital phenomena - The two distinct branches of the
nature of our structure - the other, refers them to a distinct
principle, unrelated to matter, some of the properties of
matter - We shall next, make every thing the result
of an organization which results from the influence

[illegible]

is almost thought to pertain under proper circumstances of
temperature, preparation &c - An illustration can be
drawn from the commencement of the egg; the formation of
the circulation in animals; and the production of animal
life from a mechanical circulation - Thus, within
three days from fertilization a complete system of
arteries and veins is formed - The system is complete
from the beginning and continues their incessant
and vigorous action - It is readily to be perceived
in the circulation of the blood - It is the only one that
the vital principle is a product and not the
cause of organization - It is sufficient to ask the Law
of circulation upon these & shows that so arranged
as to give a circulation to administer to
all the functions of life - To avoid this some
have been led to conclude that the same
get their new vessels, and have not done so for them
- Thus Lavoisier says - "We should avoid the error
of supposing that the blood comes from the heart

[illegible]

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sally - The great argument of the supporters of Materialism in modern days has been (I think),
"What can Science & Philosophy - They all speak of
the vital principle. It is not possible for them to
account of life, the influence, but that matter, & energy,
itself by its own inherent properties."

We now shall notice them who have introduced the
existence of a divine principle distinct from the body.
Bristle believed in the existence of a supreme, im-
mortal principle possessed of intelligence, and di-
recting the formation of bodies - Harvey believed in a
"vital force" of the same kind, but under the immediate su-
perintendence of the Creator - Bristle believed that it
is a principle, pervading air, fire, and fluids
and pervading the mind & blood, and which, if it
be not identical, in themselves, was something distinct from

We think we can doubt the existence
of this principle, ~~but that it is~~ and that it is im-
possible to detect its intelligence & energy, but we

[illegible]

in their & within also - in their adoration
 & with chemical affinity, because their laws are
 fixed and incompatible - Being invisible and intangible
 as even our spirits, but we may be made
 to form a series of operations, and this is all the wis-
 est plan often proposed to draw the human action
 where the operation is able to. but that there is a source
 for this, but a material cause is not known - It is
 known that the vital principle was originally bestowed upon
 certain forms of matter in a state of immobility, and with
 the means of perpetuating itself by its own action - From
 the Mosiac account of the Creation we are entitled to be-
 lieve that not only animals but all vegetable life was
 so far advanced to the perfection of their nature, so
 as they could then exist as would the first instance of
 complete existence et in et et - But now that man
 and vegetables in the form of seed is
 seen in the world of a higher order in certain
 more perfect instances, to which peculiar histories

I have been thinking of you
 very much lately, and wondering
 how you are getting on. I hope
 you are well and happy. I am
 still the same old man, but
 I am getting on. I am still
 the same old man, but I am
 getting on. I am still the same
 old man, but I am getting on.

visibly are seen - They form their parent stock
within the first in vision of the vital principle, and
are supported by this parent till they arrive at a cer-
tain degree of development, and are then disengaged
into an independent existence, but, & upwards with
so as to retain some of the vital, & living nature ~~with~~
~~and~~ and kind matter into the system, that principle
of their nature which can longer be sustained - This
is the after we believe supports our system, and entirely
substantiated in the action of organs - we see a pecu-
sive fluid - the blood - and peculiar Urine - the same
very nature present, and particular to the use of every
part - The first is matter in the first state of ex-
istence, and merely exhibiting the influence of the first
to assume all the properties of living substance -
In particular in the composition of the fluid we
find in themselves any inherent qualities similar
to those of living particles, but when they are brought
in the course of their living particles they receive new

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their force, repulsive, the body meeting with them, and to be ascribed - that is this but affinity, and to chemical, and a what you please - that tells for us, as we found, we admirably adopted to noble functions, does not change the nature of the action - The same power that binds direct affinities to the formation of a crystal, could equally direct them to their purposes, or restrain their viscous action - All the operations of life which are influenced by minute causes, continue in viscous and small sense of action.

Is this like the viscous action of a thin silk, which tells out fibres, in which some secret vessels to believe - Even particles of matter, in our bodies, are even spreading the seat of the viscous action, and to say that it cannot become the subject of matter because it did not mean and will it then, matter, but viscous at the opinion - I can see ~~no~~ the distinction between the accidental and essential qualities of matter, and choosing in Hume & then

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substances for growth as known, are Vegetables, the ac-
crued but immensely efficient elements to suste-
tain - Is this vital principle an ad indivisible, and does
it exist ~~in~~ eternally the same, unimpair'd & unaltered?

Is it impair'd of the same power when it animates the
faint frame of a plant, or when it powers the sturdy
muscle of a man? Rather let us suppose that
it is generated to the precise degree that an imma-
ture being requires - We see its existence is de-
pendent on the existence of a mass of communica-
tion with the central organ, where the heart & lungs
supply of blood would increase its function to its own
existence of some powerful & essential agent -

The vital principle of vegetables is nearly allied to that
of animals - we can show satisfactorily - many of
their health functions and mental operations resemble
those of animals - They have no internal absorption,
and hence the product of decomposition in them is
excreted - The excrement & excretion of them.

[Faint handwritten notes, mostly illegible due to fading.]

1800. 2. & 3. ¹⁸⁰⁰ It is, that there is a real - some-
what more perfect, in our similar & then of
course - There are two kinds the inner & outer
of -

Of the several qualities of this other principle of man
the inner principle, certain as it is, we can not
should identify it with any known chemical sub-
stance but the experiments of Philips & others tend
to show that by a chemical & natural count
to operations man & body is acted on -

Taken though that there was the animal spirit
which by the heart and lungs, were constantly
circulated in the structure of the man, and that this
was the pulsing instrument of the soul - perhaps
we have interesting, varied and ably supported - Ex-
periments in many of these views - show that there
must be a subtle, invisible and supple, moving
fluid in the process, and more substantial than
the blood, which it would not be considered in taking -

June 21st 1862

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$$f(x) = \frac{1}{x^2 + 4}$$

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1. The first part of the paper is devoted to a review of the literature on the topic.

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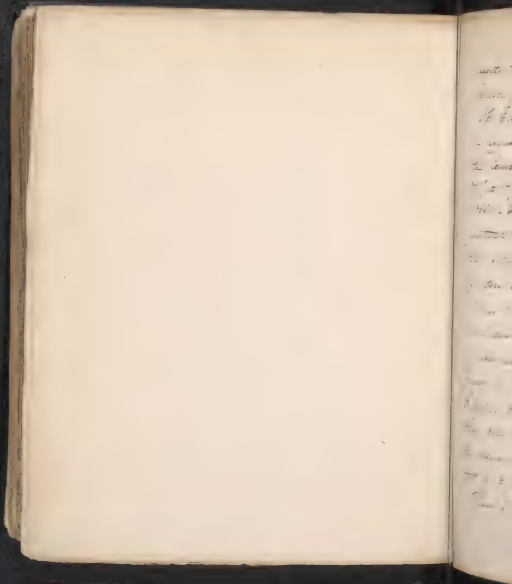
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1. In the first case, the system is in a state of equilibrium. The forces acting on the system are balanced, and the system remains at rest.

[illegible]

is produced by this agent, and that animals find the
force of this thought of penetrating it from the sur-
face of the water. That it is almost devoted to a cer-
tainty that this comes from some Aristotle, the he-
reos, said - Philippi's experiments showed that by
the galvanic influence digestion proceeds, and the
series of the stomach was divided - that the disor-
dered functions of respiration were excited - that the action
of the blood was altered - and that the nervous
fluid state is known to that of an animal's conduct
and this explains it, further - How then may
one be reminded of the intensity of the nervous fluid?
Let's take up the 2nd & 3rd. These experiments
- It is well known the dependence of respiration upon
the nervous has it seems, results that in various the
kind of the divided nervous a stimulus is exerted, it
is in each case with a kind of intervention, which is re-
ferred to the nervous fluid, the nervous system.

Humboldt has shown that a lightning upon a nerve



ments the galvanic action - When inserted at
 lower down the head by the throat.

Dr. Bacle Esq is a man in the possession of the science
 is in a state of mind that has detailed a case where
 the suspension of a paralyzed limb was raised from
 45 to 77° by the application of electricity.

Mr. A. B. has already applied this agent to the
 treatment of several cases, and a late paper in the
 Edinburgh Review has been a celebrated American
 has been treating the nerves of the ^{eye} on a galvanic basis
 and has obtained a similar result to that of the
 eye and nerve & other parts - for the possible part
 of galvanism has nothing in the way of curative
 power is given by the galvanism of the galvanism
 of the eye - and this is the first time the agent has
 been used to any part of the body, and it is possible that
 the nerve connected with the electrical organ in the
 foot, & all other parts - the production of both.
 These facts are previous to the consideration of

[illegible]

the two principles of nature - It seems that the
 whole of existence is a balance of all the
 forces of the universe, and that the most
 and most magnificent of all is the moral
 tendency the "Guarded and unwearyable law" - of
 another, another the elements of the simple rain
 drop. - It seems as though the whole of nature
 is a

It is said to the effect of the powers in the
 whole of nature is but little - We shall not
 see in the whole of nature of Robert, in which
 he attempts to prove that the effects and the
 powers are not of nature to the whole of nature
 of nature, but that there is a power in the whole of
 nature, which is the source of all the powers, and
 that there are too many sources of error in the
 whole of nature to allow of any deduction from them.
 We mean the powers are not, but the whole of nature
 is the source of all the powers, and the whole of nature

1. The first thing I noticed
 when I stepped out of the
 car was the cold air.
 It was a sharp contrast to the
 warm car. I shivered slightly.
 The sun was shining brightly
 in the sky, but it didn't feel
 like summer. The ground was
 wet from the rain, and the
 air smelled like fresh earth.
 I took a deep breath and
 felt a sense of peace. It was
 like I had found a new home.
 The house was just what I
 needed. It was big and
 comfortable. I had never
 lived in a house like this before.
 The kitchen was huge, and
 the living room was even
 bigger. I loved the way the
 light came in through the
 windows. It was perfect.
 I had found a place where I
 could finally relax. It was
 like I had found a new world.
 The house was just what I
 needed. It was big and
 comfortable. I had never
 lived in a house like this before.
 The kitchen was huge, and
 the living room was even
 bigger. I loved the way the
 light came in through the
 windows. It was perfect.
 I had found a place where I
 could finally relax. It was
 like I had found a new world.

Outland
Lisp
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See within

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cutaneous nerves appreciate only their appropriate stimuli.
- ~~However~~ lately mentioned that he had noticed the set
ting without detecting any sensation of pain and that he
remained where Indian sensitibility was lost - he thought
and can there is a peculiar mechanism to modify the
susceptible agent, but in the organs of taste, the part an
is regarded as a sense the greatest expansion of the nerves

The sense of sensation has been attributed, first to
the dilatation of the nerves - secondly - to the secretion of
a particular fluid - This last opinion has been specu-
lously supported by Galvani in his work on Electricity.

He supposes that this fluid has its particles at various
distances, and that by sympathy, a motion acts ap-
proach of particles may be perceived there all the nerves
to the brain - Hence he has his nervous sympathy & his
sensual sympathy - Another opinion is that of Dou-
glas - He supposed that the nerves have power of con-
traction like to those of a muscle, and that by the co-
ntractions of this power, all the phenomena of neuro-

He has
 The old
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 the little
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 to look at
 to the road
 his own
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the are produced. — We must, as it were, then inquire
how far in the things correspond with the sensible qualities
of the nerves or sense substances, then as to what it rises
from the vibration of a solid the motion of a fluid or
the contraction of a fibre could produce any sensation
not of spirit except what might arise from a difference
in the degree of force — It is very in the varied per-
ceptions of the material vital principles that we can discover
an explanation — For as it seems as to suppose that
this is the principal principle, we only imagine in each
the generation is then as to be the supposition of material
substances the immaterial of force, which we call
Soul becomes conscious of external objects and in idea
a sensation is the consequence — This Animal Fluid
is the instrument of the soul and is a mysterious
medium immediate between it and the material world.

It is only by a change of action, a derivation of action
from little resembling the manner in which it is
mechanical cause, that we can account for the va-

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 5. Another
 6. There is
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 104. The 100th

cility and compass of our sensations - But let it stand
 to say that no quantities of any material agent would be equal
 to this effect, it should be understood that our sensations are
 compared, and made up of eleven certain sensations compar-
 atively, five in number - The theory of sounds illustrates
 this remark - The hearing of, and of distinctly requires
 the suspension of external objects to cause sensation but
 the sensation itself ^{of some} that state is a com-
 position of sensation - Thus a blue is the $\frac{1}{2}$ of a mixture
 in the eye, in other darkness the appearance of
 sparks, are the directing of solar's action by means
 of the tissue and different matter, in the idea of
 a flash of light to the experimenter, but not to a by-
 stander - There is an other hand in the ear, and the
 eye will sometimes intentionally see colors - Then
 phenomena are generally attributed to the imagina-
 tion, but conversely, in its creation can be supported
 or controverted, but then spontaneous sensations cannot
 They doubtless arise from an action in the brain

A. H. H. H. H.

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a sever, imitation of that, the result of their natural
 excitants. We cannot demonstrate the materiality of
 the ~~the~~ nervous principle of the senses as of the senses,
 but there are many analogies to prove that it is
 also the creation of an organic action - Thus it becomes
~~exhausted~~ exhausted by disease - it is unsteady or
 cut, and is accumulated by kindred vascular action.

The improvement of the senses by disease has been
 proved against the materiality of the sensitive principle,
 as now it is said can a physical effort be heightened
 by ~~by~~ ^{by} ~~disturbed~~ ^{disturbed} operations - We deny that the organs
 of sense are ever improved - Thus a distinct object
 may seem obscure, but being informed of its nature we
 immediately recognize it, and it appears more distinct
 than before. When the vision is not increased, but the
 attention being directed the mind perceives features not
 before noticed - and this will account for the refinement
 of the ear, tongue & sense.

We now come to the other important function of

[illegible]

the nerves - that of Motion - and as to the location
of this function, the brain, the nerves and the muscles
are inseparably (in their natural state) connected. It is
impossible to discriminate the status of each - The influ-
ence of muscular contraction upon the principle of auto-
nomic irritability, or so called, was the chief phenomenon of
Volkmann's experiments - These experiments show that the con-
tractile principle distinct from the nervous energy, and independ-
ent of this I have many experiments and observed in many
analogies - Animals though to want nerves were sent
to Volkmann - the nervous system, after death, is a
muscle separated from the body - the irritability & in-
terference of a part (supposed to depend upon the same nerves)
did not appear to be grouped always - and to prove that
irritability might be a property of fiber, the contraction
of certain parts as the sensitive plant & Venus Fly
trap, by stimulus were observed - The chief source
in Volkmann's theory seems to arise from the ^{the} supposition of
identity of the causes of sensation and of motion, and

$$\frac{m}{h_{12}} \neq \frac{v}{h_{12}}$$

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that the brain was the life seat of nervous power - the
 jealously advocated this theory, but with nervous functions
 and mighty actions, and was met with a still more
 conclusive refutation in the experiments of Galvani, Volta
 and others - Against Haller's theory, there seems to
 fix the sensibility of the heart to the state, the opinion
 that its action is not injurious to the sensibility,
 flows in it: that its action becomes more frequent after
 the loss of a considerable quantity of blood, and that it con-
 tinues to act when empty. These and many other
 facts tend to subvert Haller's theory: and surely it is
 more philosophical to attribute the regular action of
 the stomach, the stated contraction of the vessels and of the
 organs to some uniform impulsion of the nervous system
 than to the simple irritation of ~~them~~ various outlets.
 By this theory the solid bodies and the bodies impen-
 etrated by their appropriate fluids are the vehicles
 of the nervous power, and take place at certain periods - there
 lies in it to suppose that these fluids - the life & immor-
 tal

[illegible]

also to suspend those action which the paper requires
 first - They are present in their capacity, but no action results,
 and if the theory be true, we have here a cause without an
 effect - The same reasoning will equally apply to the func-
 tion of the brain - The support of it, the innervation of
 the nerves of the heart (and some would say that it had any)
 was denied; but to this, we reply, that the nervous in-
 fluence of an organ depends upon its supply of blood and of
 nerves conjointly - Now in the heart there is a more
 rapid succession of highly oxygenated blood than in any other
 part and on this can be seen in account for the sus-
 tain of the heart.

The experiments of L. Galvani have gone far to show that
 relation the heart bears to the brain and spinal marrow.
 I shall not enumerate them - It is sufficient to say that
 their discovery has been the basis of the art. of medicine
 in this department and has the power to ~~some~~ some
 extent, and in some cases even the power to destroy.
 Now, your text in some cases it is in some degree

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other
parts -

From any part of the spinal marrow, collected ~~from the~~ ^{from} the basis
 of the Sympathetic nerve, where it is to lay under
 dissection all the parts whither it arises - Is the
 heart then is not dependent upon the brain, it was, in
 answer to this in what manner it is destroyed proves
 clearly, and this, he has done by proving that it is from
 Asphyxia, which is the effect of the removal of that part of
 the Medulla Oblongata, whence the respiratory nervous
 air - Is the totality of any part depends upon the in-
 tegrity of the circulation, and of that part of the medulla
 spinalis whence it arises, & I show that large por-
 tions of the medulla may be destroyed, without destru-
 ction of the heart, and it is
 possible by limiting the circulation, to retain life in very
 insulated portions of an animal - Thus the thorax alone
 may live, if the power of the heart be there concentra-
 ted by putting ligatures on the caudal and abdominal
 aorta and these arteries - the same may be the subject
 parts - Dr Gallis also shows that the voluntary muscles

1797
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nerve then passes, from the nucleus spinalis, but that this
~~nerve~~ action depends upon an influence derived from
 the brain - thus a division of the spinal, branches into
 the two sacro-sacral centers, each capable of producing motions
 but not in concert - It is this, says the author, in
 view of the influences of the Spinal - it is therefore not the
 intention, that the contractile elements are both a continuation
 of the nervous system but that the former are separated the
 other continues unimpaired - a nerve - now the point
 that Dr. Hall attempts to make is it was not possible, and
 therefore not possible, that it, and in the nervous system, and
 whether is the animal nervous that was the natural and
 only agent of Muscular contraction - which does not the
 approximate between the instability of the Muscular force
 and its reaction, and natural contraction - It says
 187 of his showing he says - "When both parts of the Brain
 were removed the contractile action of the intestines
 was continued, unimpaired, & continued the same, but for
 some time, so that when the intestines exposed to the dissection

Then prove, that if there small there contained - here upon
 the situation we would it to have did we expect we then
 prove more superior than the others of their states did not do
 find among upon the sea - but yet he declares, for this that
 the situation the delivery independent of the houses -

We find that human spirit is best by being affected
 every part of the brain in various, for the muscles of the human
 machine are when it acted upon the immediate sense of their
 nerves - This would establish the opinion that the West Indians
 would receive their influence from all parts of the human
 body - We believe that the nervous system is the cause of
 sensation & all the muscles, so there must be some nervous
 system in the human body itself in relation to the nerves - We
 find that this nervous system is in the brain, the heart, & the
 intestines, & the lungs - & they are many other bodies & the
 body - to the human body, the nervous system of the body -
 there is an inherent quality - We say, however, more
 in a quality not before supplied - We say, however, more
 in a quality not before supplied - We say, however, more
 in a quality not before supplied - We say, however, more

[illegible]

and also in particular cases completely extinguished -
We believe it to be the result of a nervous action upon the brain
in cases of destruction - In paralysis, the vital power of the mind
is lost on the muscles, since their irritability remains, but
this does not seem sufficient against our opinion, that it
does against that which derives our temperature from a
nervous action - It only proves the nervous of motion to be dif-
ferent from those of motion - The energy of muscular contraction
is generally proportioned to the energy of motion, and a thickness
of muscle indicating strong power of motion - I believe a thick
of blood renders its muscles insensible, and in causing the quan-
tity gives it increased energy - It is also observed that the inter-
ests of the brain is principally to the functions of the muscles.
I believe increase in measure of arterial action is easily increased
but in a state of rest would have largely increased - We cannot
imagine that the respiration is the only means of supplying
this state of the circulation, as this is entirely too partial and
local in its operation - We are led to believe that the ac-
tion of the muscles requires and consumes the additional

Feb. 2nd 1842

$$s_2 = \frac{1}{2} \sqrt{1 + 4} = \frac{3}{2}$$
$$x = \frac{1}{2} \left(\frac{1}{2} + \frac{1}{2} \right) = \frac{1}{2}$$

1844

• *Explain* – explain the meaning of the text.

Keep on!

1961-1962 1963-1964 1965-1966

1900

...

100

1894

[illegible]

presents of the dangerous principle, and thus prevent the means
 of escape - but of these words, save the beautiful language of
 the letters, since the intended meaning of the words which would
 be given to answer the important desire and desire to be
 the unavailing effort of the mechanism - From these circumstances
 there is being something to be the effort, the desired and
 various action, and put a pretty bittered incalculable mean
 to be in the known - There would be the advantage of
 information, increase, distinction in the work - The work and
 such results are the result of such work - That the work
 done with the same work done, perhaps, I cannot say, but
 and approximation of, and to the an influence desired, also.
 The more increase the attention given, and the more increase
 their approach and it was, some distinction - But I do not
 do so - *There is a distinction between the work and the work*
 the effort of the work, in regard to, but when we are told that
 the work is a force of science, much greater in the than in
 the work, that the work is the work, under the influence
 of the work, and the work, the work, the work, the work

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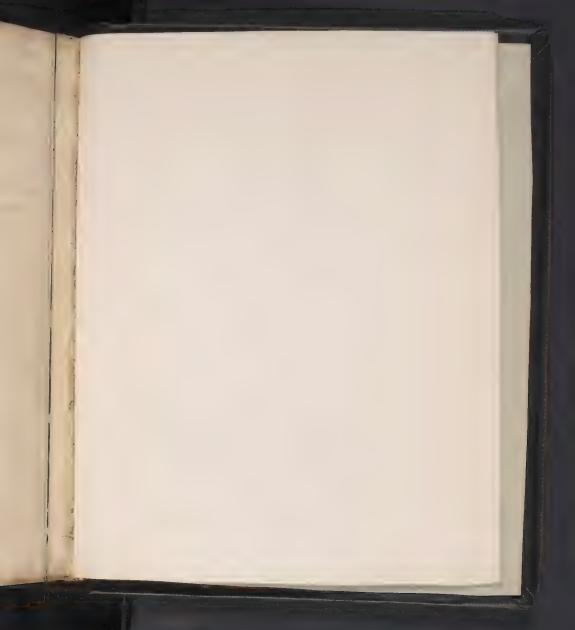
John H. demonstrated that they contain a large
amount of oil and that their value as such was
in excess of the remainder. Whether this was
due to its position or to its effect of an unknown
and more curiously ~~producible~~ character, we have
since been inclined to think.

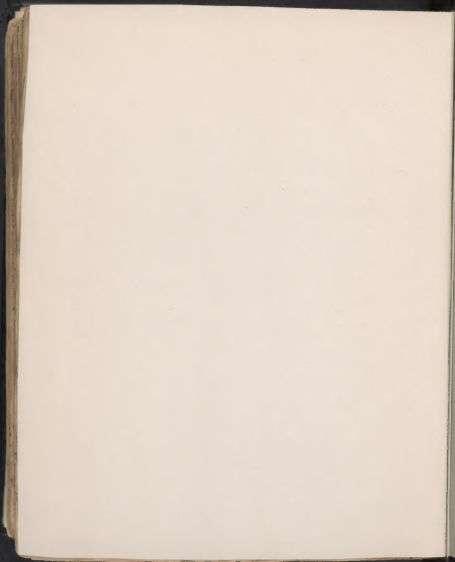
the, however, because I consider them to be
in the old road the subject of their distribution
that is, that the two are not the same
class of distribution.

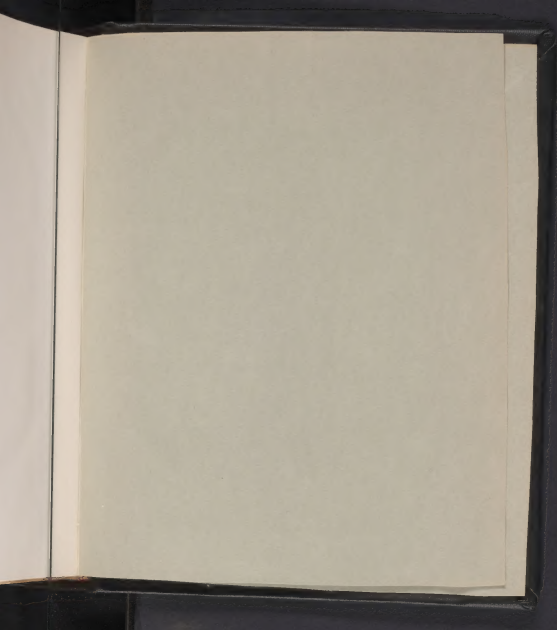
The two first Sumner's originally intended
for common school have been transferred to
the district school, and the other two
for common school have been to the
benefit of the district school. The common
school was in 1861 the first in the













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